Phase I Archaeological Investigations at the Mulberry Street Sidewalk Project, Allison Park, San Antonio, Bexar County, Texas

By

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SUBMITTED TO

City of San Antonio
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By

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Abstract

Abasolo Archaeological Consultants conducted archaeological investigations to locate the Upper Labor acequia in Allison Park as part of the Mulberry Avenue sidewalk project in San Antonio, and to also test for buried prehistoric deposits. TAC Permit #5680 was issued in order to perform the work. The acequia was located during backhoe testing, and it had been used to install a concrete-capped sewer line sometime in the first half of the 20th century. Investigations for prehistoric sites were negative except for a trace at the back part of the terrace near the acequia. No further archaeological work is recommended.

Introduction

Abasolo Archaeological Consultants conducted a Phase I archaeological investigations along the planned sidewalk route along West Mulberry Avenue from North St. Mary's east to the San Antonio River in Allison Park. The focus of the investigations was to locate the Upper Labor acequia and test for buried prehistoric deposits. The project was carried out under a contract with Parks and Recreation Department, City of San Antonio (see Fig. 1). Since the proposed project is on public land, the research was performed under the Antiquities Code of Texas, and Permit #5680 was issued for the project from the Texas Historical Commission prior to field work. The project was carried out in accordance with the "Archeological Survey Standards for Texas" in order to assess the significance of any potential site regarding potential eligibility to National Register of Historic Places and as a potential State Archeological Landmark.

The project involves the construction of a sidewalk (Figs. 1 and 2) from North St Marys Street eastward along the south side of West Mulberry Avenue to River Road. The route of the sidewalk will avoid disturbing the large trees on the north side (Fig. 2), and will be immediately south of the wood fence that currently borders the north side of the park. The path of the sidewalk as seen on the plans is like a recurved bow (Fig. 2).

The main concern expressed by the Parks and Recreation Department and the Office of Historic Preservation was that the sidewalk project crossed the Upper Labor acequia, one the Spanish Mission era acequias. Early maps (Figs. 3-5) showed the Upper Labor acequia along the back portion of the San Antonio River terrace along the property line

on the west side of the park, but the precise location was unknown as it is not visible on the surface.

The field work was carried out with two main objectives: locate the acequia and test the terrace deposits for buried archaeological sites. The concern regarding the latter objective was based on the presence of a prehistoric archaeological site (41BX264) on the same terrace in the polo field (now a golf driving range) north of West Mulberry Avenue.

The Spanish acequia system has been mapped out by the late Waynne Cox and described in his book *The Spanish Acequias of San Antonio*, (2005). A copy of his master map is filed at the City of San Antonio Office of Historic Preservation and a copy is in the Abasolo Archaeological Consultants library. Part of is map illustrated in Figure 3 shows the Upper Labor acequia crossing Mulberry Avenue west of the river. This map is not sufficiently detailed, however, to be certain as to precisely where the acequia is located relative to the Allison Park boundary.

Geology and Soils

The Brackenridge Park area (including Allison Park) lies south of the Balcones Escarpment, though faulting that formed the escarpment created major springs in the area (e.g., San Pedro Springs, Blue Hole) coming out of the Edwards Aquifer. Geologic deposits within the Parkare dominated by Holocene silts and clays, capped by recent fluviatile terrace deposits . More detailed studies are in Meskill and Frederick (1996; see also Houk et al. 1999). Much earlier geological outcrops are notable around the Sunken Gardens, specifically the Austin limestone (upper Cretaceous) quarried for building stone in early San Antonio.

The park is mostly a relatively flat terrace composed of Lewisville silty clay soils (0-1 percent slope) (Taylor, et al. 1991: 25). The soils are described as very firm and are one of the most productive agricultural soils in Bexar county. There is no wonder that the Spanish selected this terrace for cultivation. The stony soils of the Tarrant series occur

on the rocky slopes of the valley wall along St Marys Street at the western margin of the project area (ibid.: 30).

Archaeological and Historical Background

Prehistoric Archaeology

Prehistoric sites in the upper San Antonio River drainage have often been damaged or eliminated by development and river modification. Based on archaeological research in the general region, one could predict that the remnants of 11,500 years of human occupation would be found along the river and adjacent terraces (see Houk et al. 1999). The earliest human presence was likely in the **Paleoindian** period, 11,500-8,800 years ago. Indicators of such occupation would be spear points of distinctive style and date, such as Clovis, Folsom, Golondrina, and Angostura. In the following **Archaic** period (8,800-1,500 years ago), the Native American population greatly expanded, and their sites are often found on terraces overlooking local streams. Sites are typified by large numbers of flint (chert) flakes resulting from tool making, dart points (used on spears thrown with the spear thrower, or *atlatl*), and fragments of limestone rock for cooking and for earth-oven techniques that often result in major accumulations of fire-cracked rock fragments. It would be expected that sites from the long-lived Archaic would be indicated by burned rock fragments, burned rock midden, diagnostic spear points and tools used in wood-working or other tasks, and the flake debris resulting from tool-making. The **Late Prehistoric** period (A.D. 500-1700) is most clearly indicated by the occurrence of tiny arrow points, indicating the introduction of the bow and arrow into the area around A.D. 500-700. Later in this period, around A.D. 1250-1700, there was a regional emphasis on bison-hunting, and the material culture from this era is notable for the presence of pottery and other distinctive artifacts.

With the establishment of the Spanish Colonial missions early in the 18th century, and the arrival of Lipan Apache raiding parties by the 1720s, the Native American populations were greatly modified. Those who went into the San Antonio missions,

where they were joined by groups from south Texas and northeast Mexico, continued their distinctive bone-tempered pottery, along with stone-tool making, throughout the Spanish Colonial period. These Native Americans still used the San Antonio River for hunting and fishing, for plant food gathering, and for short-term occupations. It is likely that established Late Prehistoric campsites along this part of the river would have been reoccupied at different times after Historic contact. Given the proximity of Mission San Jose and Mission San Juan Capistrano to the south, there well could be Historic Native American remains, likely dating to the 1700s, in the project area.

The best known archaeological remains near downtown San Antonio are related to the Spanish Colonial and early Anglo periods of occupation. Along the San Antonio River are the four 18th century Spanish missions that are now part of the San Antonio Missions National Historical Park and the former mission of San Antonio de Valero (the Alamo). The missions, and features linked to the missions (such as acequias, gristmills and dams), have received a great deal of archaeological attention In particular, the acequias have been researched extensively, both archival and archaeological, over the years as part of the planning process for city projects (e.g., Frkuska 1979, Cox 1986; Fox and Cox 1990; Nickels and Cox 1996; and the synthesis by Cox 2005).

Archaeological Sites in the Park Area.

The first comprehensive review of historic and prehistoric cultural resources in the Brackenridge Park area was carried out by the Center for Archaeological Research, The University of Texas at San Antonio in 1978 (Katz and Fox 1979). This provided a baseline view of such resources, some well known and some located during the Katz and Fox field work.

Along the banks of the San Antonio River from the headwater springs to south San Antonio are many historic and prehistoric archaeological sites. Just within a kilometer of the Mulberry Avenue Sidewalk Project are several recorded prehistoric sites. For

example, 41BX264 is a large prehistoric campsite located across the road in the Polo Field. Site 41BX293 just south of the project area is another prehistoric campsite. Other nearby sites includes 41BX170, 321, 322, 323, 1425, and 1773. Site 41BX323 has been the most extensively excavated and reported (Houk et al. 1999 see also Meskill and Frederick 1995; Meskill et al. 2000). It was an area used from Late PaleoIndian times (Angostura points), into the Early Archaic (Martindale; Guadalupe tool), Middle Archaic (Pedernales) and Late Archaic (Castroville, Frio) and intermittently into the Late Prehistoric (Scallorn, Perdiz)

Among the numerous historic sites in the general area of the Park (Katz and Fox 1979), several are of particular relevance to the Mulberry Avenue Project. This include a section of the Upper Labor acequia exposed near the San Antonio Zoo and the Upper Labor diversion dam, which provided water to that well known acequia, found in 1996 (Cox et al. 1999).

With the known archaeological background, the fieldwork by AAC had to consider the potential for the occurrence of both prehistoric and early historic (Spanish Colonial to ca. 1870) sites. Because Brackenridge Park is situated partly on the floodplain and partly on a low terrace, it is a high probability area for buried prehistoric cultural remains. These remains could date at any time during the long prehistoric period of occupation in the San Antonio River Valley.

Previous Archaeology of the Upper Labor Acequia

Among the most fascinating remnants of the early period of San Antonio is the system of acequias. Built in Spanish colonial times, beginning in 1719, there are a number of different acequias along the San Antonio River and other drainages and springs. It appears that most acequias were named and drawings exist to show the locations of their channels ("ditches) over the centuries. The archives hold records that detail the construction of dams to provide water for the acequias, the ongoing maintenance of the channels, and the allocation of property along them. The acequia in the area of the

Espada mission remains partly in use today, many others were used until the early 1900s, and some were shut down beginning in the 1870s, as wells began to provide water for the city.

One very significant acequia system is known as the Upper Labor (*Labor Alta*) acequia, construction of which was carried out in 1776-1777. It was 3.5 miles long and irrigated 300 acres in the area between the San Antonio River and San Pedro Creek (see Cox 2005:18-19). Its history is documented in detail in Cox et al. (1999), including details on the "wingdam" built, in Spanish Colonial times and upgraded in the 19th century, to divert water into the acequia (see also Cox 2005). The acequia was badly deteriorating by the 1870s, and much of it was filled with debris by 1904. The Upper Labor acequia and several other major acequias were shut down shortly thereafter, with city engineers using some of them as "drainage channels" (Cox et al. 1999).

Except for exposures above the old City Water Works and in the San Antonio Zoo (ibid.), the route of the Upper Labor acequia is not apparent on the present surface although its approximate location is known. Prior to the construction of the Mulberry Avenue sidewalk, we carried out fieldwork to try determining the location of the acequia so that it would not be damaged during sidewalk construction. In addition, the City of San Antonio archaeologist requested that the sidewalk route be further tested to determine if a buried prehistoric archaeological site exists along the construction route on the terrace west of the river. Site 41BX264, a large prehistoric site, lies across Mulberry Street in the Polo Field.

Scope of Work

The following tasks were conducted during the course of the work:

1. Conducted background research by consulting relevant maps in an attempt determine the location of the acequia within the project area.

2. Excavated a backhoe trench at the suspected location of the acequia in order to confirm its location.

3. Excavated two backhoe trenches between the suspected acequia and the San Antonio River to determine if buried archaeological deposits exist. All trenches were backfilled.

4. If found, we were to document any archaeological sites and isolated finds encountered in the survey by obtaining GPS coordinates on the location and plotting the resources on a project map.

5. We committed to provide interpretations of the survey findings and assess the significance of any archaeological sites encountered within the project area with regards to their potential for nomination to the National Register of Historic Places and as a Texas Archeological Landmark.

6. Prepared this written report detailing the area surveyed, methods used, archaeological background, historical background, survey findings as specified under the Texas Antiquities Code to fulfill the TAC permit requirements.

Any diagnostic artifacts encountered were to be drawn or photographed for documentation. Since completion of field work, we have prepared a written draft report. This will be submitted to the Texas Historical Commission, Parks and Recreation Department, and the Historic Preservation Division, for review. The report is accompanied by a site plan with the investigated areas precisely located.

Results of Investigation

Prior to the field work Hester conducted a background review of the previous archaeology and history pertinent to the project area. Shafer consulted with Larry Clark of Bender-Wells-Clark Design at the request of Kay Hindes; Mr. Clark had traced a portion of the acequiea within and in the proximity of the project area; Mr. Clark also provided the authors with a copy of the map illustrated in Figure 4. Waynne Cox's master map of the San Antonio acequia network was also examined to assess his plotting of the Upper Labor acequia at Mulberry Avenue.

The surface inspection did not provide any indication as to where the acequia crossed the path of the sidewalk Therefore, we chose to conduct backhoe testing to locate the acequia.

Three backhoe trenches were excavated in order to fulfill the objectives and scope of work. The locations are shown in Figure 6, and the trenches will be described individually.

BHT#1. This 9-meter long, 70 cm wide trench was excavated in an effort to locate the route of the Upper Labor acequia (Figs. 7 and 8). The UTM coordinates at the west end of the trench are 14R 55617E/3258695N. It reached a depth of 1.2 meters. It was started near the western boundary and in the northwest corner of Allison Park where the location of the acequia was expected based on extant maps. The backhoe soon encountered a concrete cap of a buried sewer line ca. 50 cm below the surface at the west end of the trench (Fig. 9). Further investigation showed that this sewer line was dug into the acequia as the eastern slope of the acequia ditch was detected in the profile, three views of which are shown below (Figs. 9-11). Prior to the excavation of the sewer line, dead brush was apparently dumped into the canal and burned and the south profile provides the best view of this feature (Figs. 9 and 10). Charcoal and ash deposit marked the canal boundary, and this deposit was intersected by the sewer ditch. Once the sewer line was capped, and the ditch backfilled, a caliche cap was placed over the sewer line (Figs. 9 and 11). While it is unfortunate that the sewer line fills the acequia at this location, the practice of placing sewer lines in acequias was not unusual according the COSA archaeologist Kay Hindes as a similar situation was encountered in the Main Plaza in downtown San Antonio. Placing sewer lines in acequias made sense from an engineering standpoint, since the grade was already defined.

Elsewhere in the trench and in addition to the sewer line and acequia, we did detect a trace of prehistoric material beneath the layer of disturbed fill within an A horizon from a depth of about 35 to 55 cm below surface (Fig. 10). This trace consisted of several chert thinning flakes found along the 9-meter long profile and an occasional land snail

(*Rabdotus)* shell, a species of snail that was a common food source for prehistoric groups in the region. These materials are unlikely *in situ*, but are part of a colluvial wash that originated on the higher terrace slope to the west. Although a couple of burned rocks were found and there was no indication that cultural features such as rock-lined hearths were present at the location of the backhoe trench. Therefore, we consider the integrity of the prehistoric material to be lacking.

Beneath the A horizon was a B horizon that graded into a Bk horizon at a depth of about 75 cm below surface with gravels and calcium carbonate. No cultural material was observed in these deeper deposits.

BHT#2.

This trench was placed about 45 meters east of BHT#1 (at UTM coordinates 14 R 550659E/3258680N) to test for buried prehistoric deposits (Fig. 12). It was about 3 meters long and reached a depth of one meter. The upper 55 cm was badly disturbed and contained late 20th century trash (bottle glass, plastic, brick fragments, etc.) indicating efforts to level the park surface. Beneath this was an A horizon consisting of dark grayish brown clay that was sterile of prehistoric cultural material (Fig. 14).

BHT#3

Located another 75 meters east of BHT#2 (UTM coordinates 14R 550734E/3258659N) along the sidewalk route, this three meter-long trench reached a depth of 80 cm. A natural soil profile was encountered beneath an upper disturbed layer that showed the area has had little disturbance (Fig. 13). The upper 20-25 cm was a dry blocky brown clay that did contain some evidence of disturbance (broken bottle glass). Beneath this upper disturbed horizon is an A horizon consisting of very dark brown clayey soil, no gravel. The B horizon is a very dark brown soil naturally grades into a lighter gray brown clay soil. No prehistoric cultural material was encountered in this trench.

Summary of Investigations

The first objective of the archaeological investigations was to attempt to locate the acequia that we knew crossed the route of the proposed sidewalk. This objective was accomplished but with the surprise that the acequia was used to install a sewer line capped with concrete sometime in the first half of the 20th century. We had no record or indication that the sewer line was present, but once found, we did locate manholes on the north side of Mulberry and also at the end of Huisache Street which were both in line with the location in BHT#1. The profile also showed a trace of the eastern edge of the acequia which had been cut into by the sewer trench. The bottom of the acequia was identified by a deposit of charcoal that extended from near the surface at that time along the sloping ditch surface. Apparently the acequia was partly filled with wood and brush which was later burned.

Efforts to find buried prehistoric deposits were largely negative. A trace was noted in the A-horizon soils beneath the disturbed surface east of the acequia. The evidence consisted of several small chert thinning flakes and an occasional land snail (*Rabdotus*). There was no concentrated cultural refuse and only a very few fire-cracked rocks. Because the deposit in which the flakes were found consisted of colluvium mixed with alluvium, we considered the flakes as being the result of down slope erosion from a more concentrated deposit on the higher terrace immediately to the west. For that reason, we did not consider the cultural material to have any stratigraphic integrity, and was not given a site number.

No further archaeological work is recommended for this project.

Acknowledgements

The authors would like to acknowledge several individuals who aided in this project. Bill Pennell of the San Antonio Parks and Recreation Department was the department's liason and was helpful with the direction of the study. Mr. Larry Clark of Bender-Wells-Clark Design provided useful information on the location of the acequia within and in

proximity of the project area, and made available the map used in Figure 4. City of San Antonio archaeologist Kay Hindes also was very helpful in providing information on previous work in the area. Finally, we wish to thank the backhoe operator, Dale Morris of Boerne, Texas. Dale's skill and professionalism were greatly appreciated

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Figures

Figure 1. Aerial view showing the general location of the sidewalk along West Mulberry avenue.

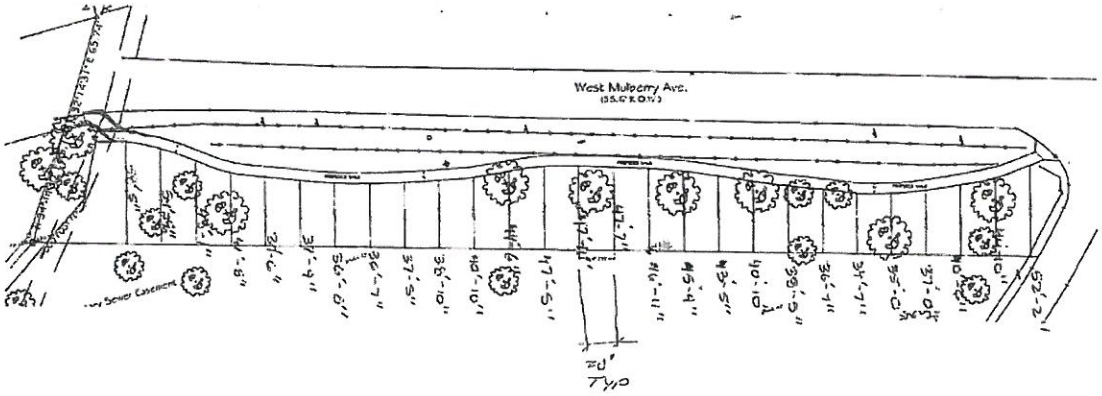

Figure 2. Plan map of the sidewalk along West Mulberry Avenue.

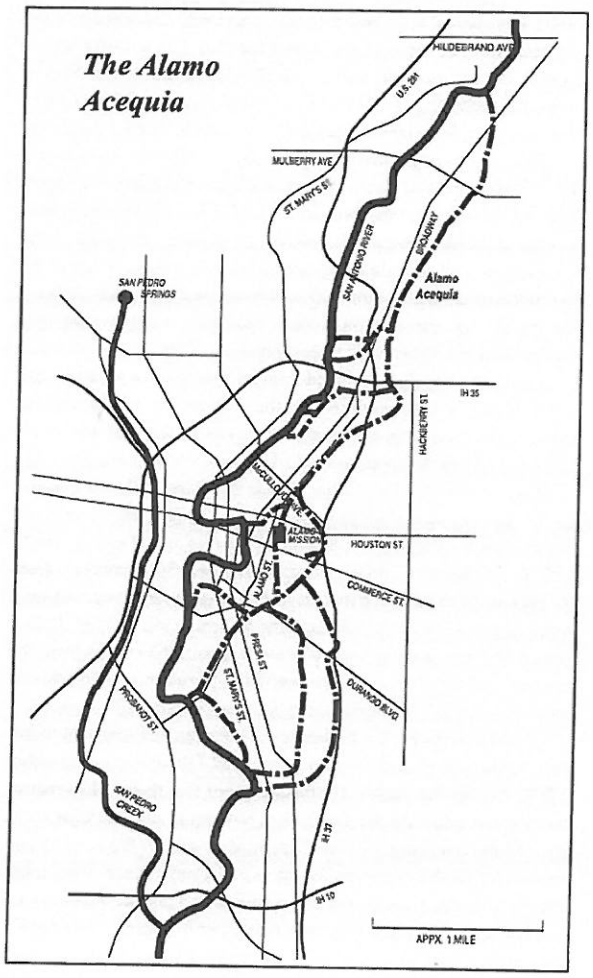

Figure 3. Waynne Cox's (2005: 21) Map of the Alamo acequia showing the Upper Labor acequia crossing Mulberry Avenue east of St Marys Street.

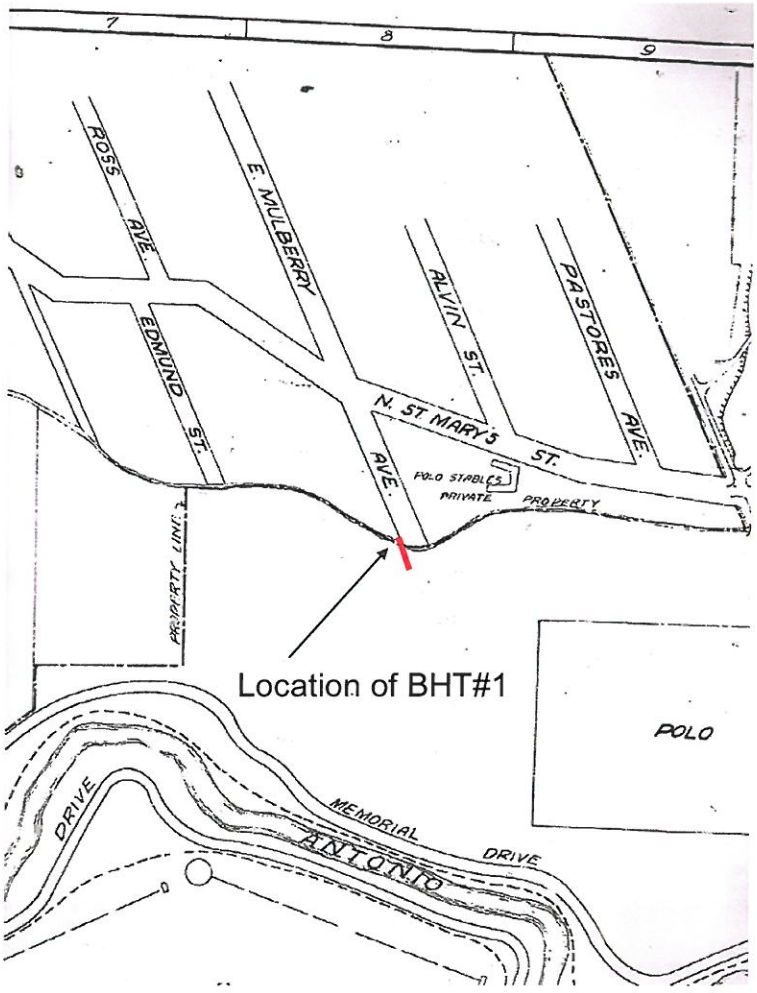

Figure 4. Map ca. 1920s clearly showing the path of the Upper Labor acequia at the end of West Mulberry. Map courtesy of Bender Wells Clark Design.

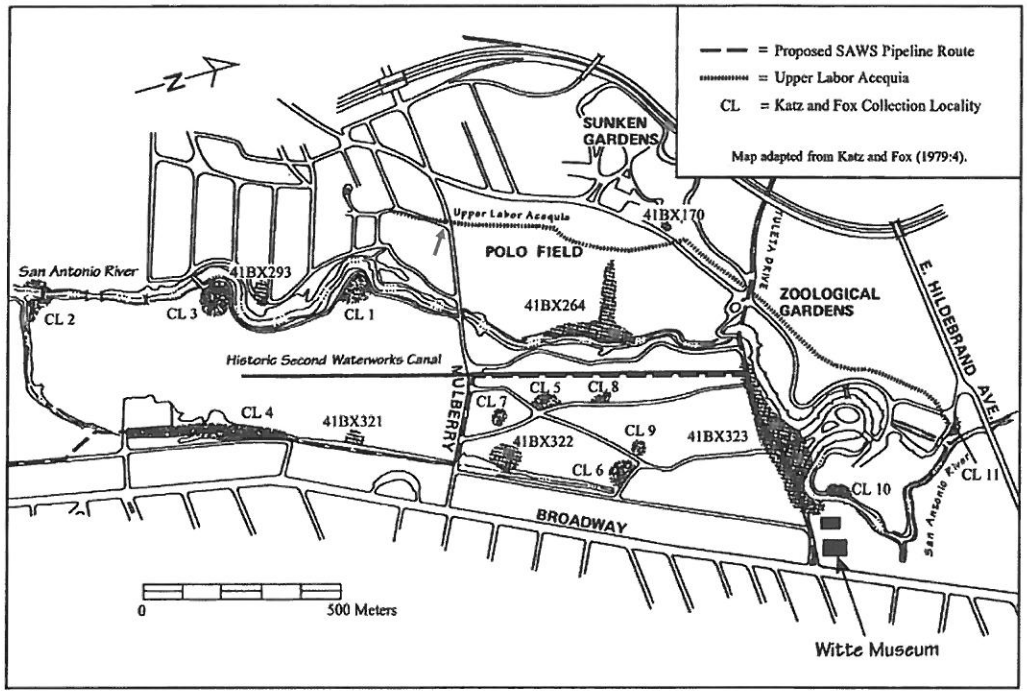

Figure 3.1. *Map of sites and Collection Localities recorded by Katz and Fox (1979).*

Figure 5. This map originally published in Katz and Fox (1979) and revised in Hauk et al. (1999) shows the location of the Upper Labor acequia relative to Mulberry Avenue and the Polo Field.

Figure 6. Approximate location of the three backhoe trenches excavated by Abasolo Archaeological Consultants.

Figure 7. This is a view of BHT#1 looking west showing its relative location to West Mulberry Street (seen to the right), and the park property line.

Figure 8 . A close-up view of BHT#1 shows the location relative to the property line. The sewer line cap is visible at the west end of the trench.

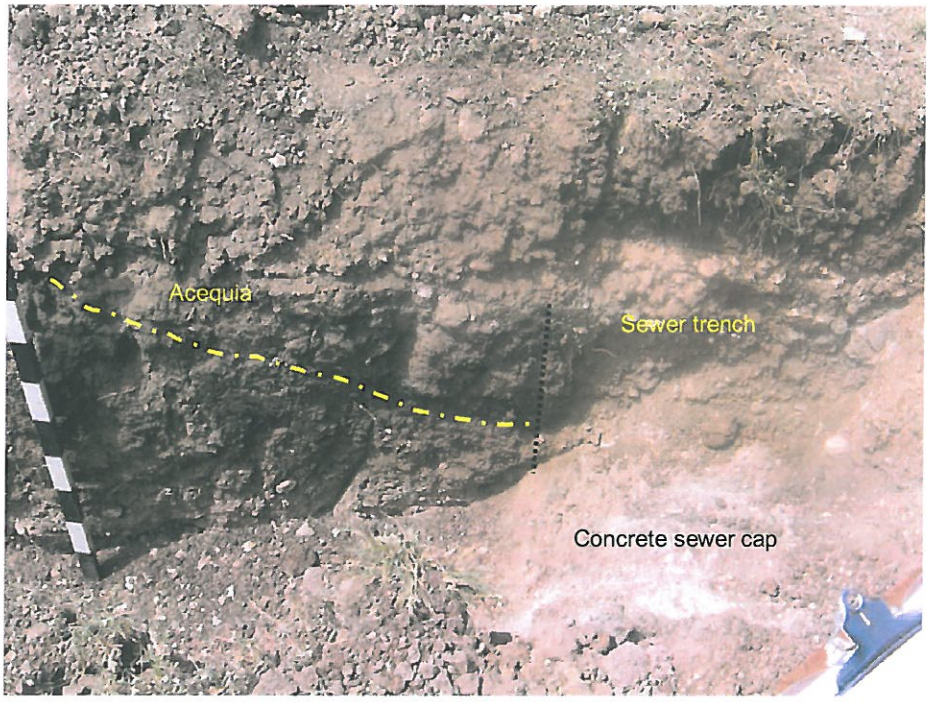

Figure 9. This view in the south profile of BHT#1 shows the sewer line trench intruding into the acequia.

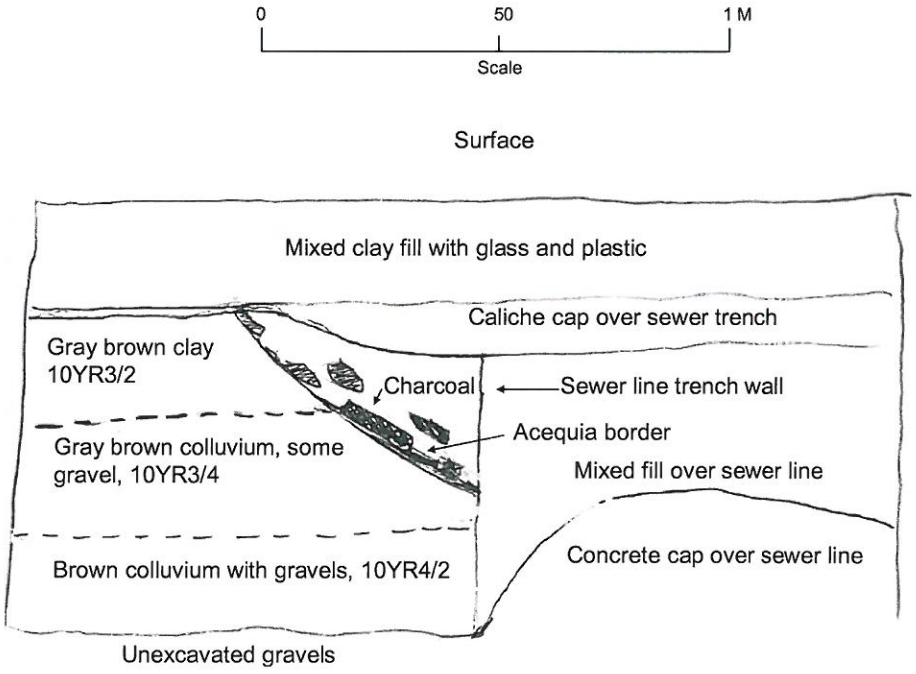

Figure 10. Simplified field sketch of the south profile that shows the relationship of the acequia border to the sewer trench.

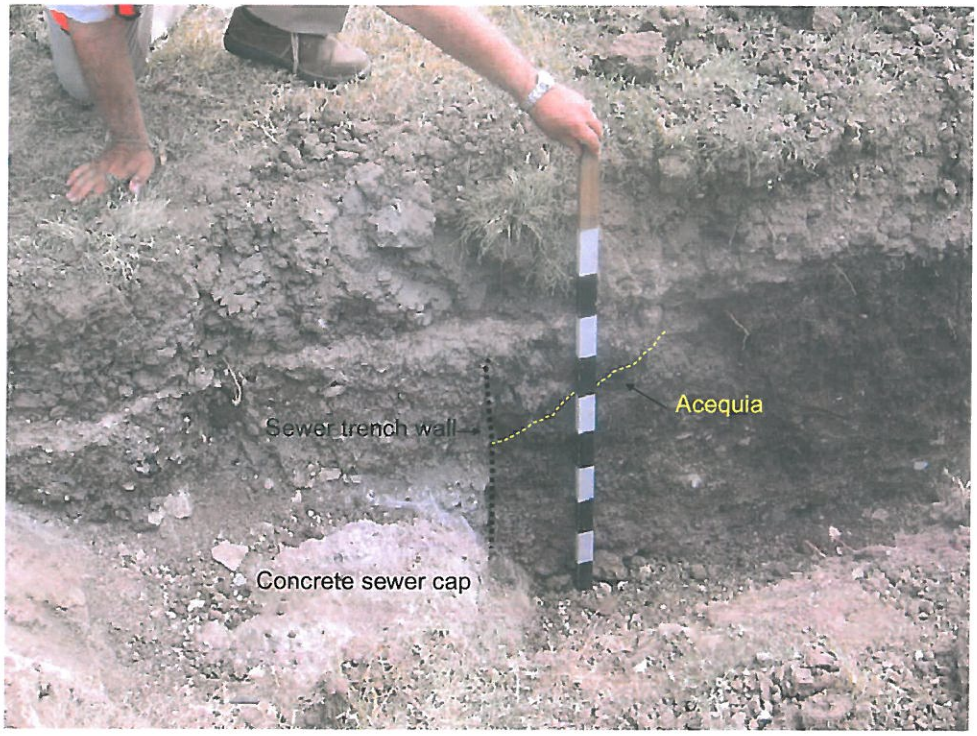

Figure 11. This figure shows the sewer line trench intruding into the acequia as seen on the north side of BHT#1.

Figure 12. Photo show BHT#2 being excavated.

Figure 13. North profile of BHT#3 showing the stratigraphy.

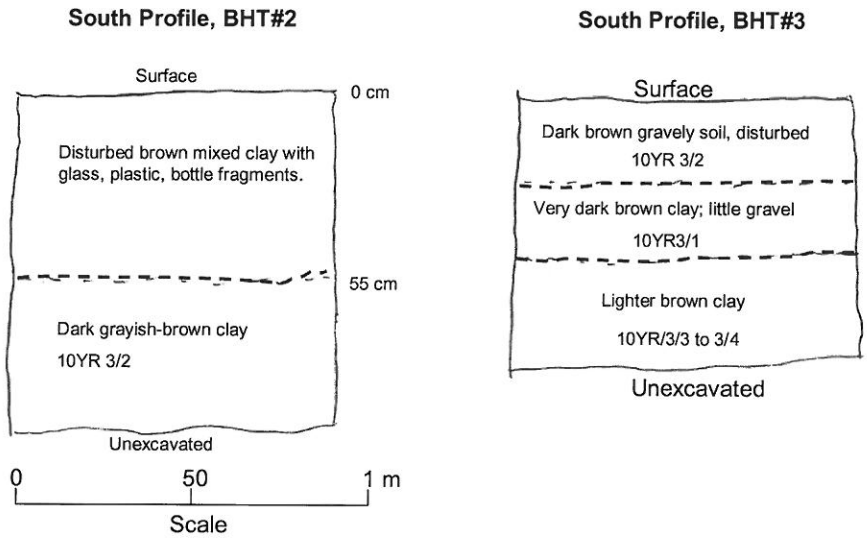

Figure 14. Profile sketches of BHT